Pragya Sharma A1506919188 The zeigarnik Effect experiment

Psycholog Practicals (Amity University)

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NAME- Pragya Sharma

ENROLLMENT NO.- A1506919188

SEMESTER- 3

SECTION- C

EXPERIMENT – 1

Zeigarnik Effect

AIM : To assess the influence of Zeigarnik effect on recall of tasks.

Introduction:

The tendency to remember an incomplete task better than a completed one is known as Zeigarnik effect. Some researchers also relate this phenomenon to certain gestalt principles but at the level of cognition (memory) instead of just at the level of pure perception. In this effect, any interruption caused in a task which requires concentration can improve the ability of a person to remember that particular task afterwards. The Zeigarnik effect was discovered by a general observation of the waiters who used to deal with the orders of the customers. Various studies were conducted to examine this effect and the outcome of most of the studies provided support to the idea that in some instances we can recall incomplete tasks better than the completed ones.

History Of Zeigarnik Effect:

The Russian psychologist Bulma Zeigarnik observed the effect of interruption on cognition or memory in 1927. When she was studying at the University of Berlin, her professor Kurt Lewin observed that the waiters at the café tend to recall incomplete tabs more than completed ones. This observation showed that the tendency to forget the completed orders were more than the incomplete ones. To test this observation, Zeigarnik decided to conduct it in an experimental setting. In the experiment she asked each participant to perform a series of separate tasks in which participants were interrupted in half of the tasks while in the remaining tasks they were given time to complete them uninterruptedly. After this, Zeigarnik interviewed each participant in which she asked them to recall the details of each task which they had performed in the experiment. Her findings revealed that the participants were able to recall the incomplete tasks 90 percent more than the completed ones. This suggested that the

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aspiration to complete a task remains in our memory until it is not completed. In 1927, Zeigarnik published her initial findings in “On Finished and Unfinished Tasks”.

In 1963, British psychologist John Baddeley carried out an experiment in which participants had to solve a set of anagrams within a time frame. He asked each participant to recall each task which they had performed. He found that most of the participants were more likely to recall the incomplete anagram than completed ones. This finding supported the relevance of the zeigarnik effect. Later, Baddeley also proposed his working memory model.

American psychologist John Atkinson also conducted a study in which he focused on the motivational aspects of the task completion. He also observed the Zeigarnik effect but he explained that the recall of uncomplete task was influenced by individual differences. According to Atkinson, the participants who performed tasks with higher motivation to complete them were more likely to recall the incomplete tasks than those who were less motivated.

Applications Of Zeigarnik Effect:

Zeigarnik effect creates an uneasiness in our minds if we leave any important work incomplete and so it keeps on retaining in our thoughts. For example, if we read a book which has multiple series like Harry Potter or watch a series show like Game Of Thrones, we experience cliff hangers in the end of the chapter or in the last episode. This happens because such books and shows are left incomplete at the end so that it can create curiosity among the readers and the viewers. It also ensures that the audience will definitely come back for the next series to read or to watch it in order to know what will happen next or why a particular situation occurred in the last series. Even in movies we experience Zeigarnik effect if a mystery in it remains unresolved. For example, In the movie Bahubali a mystery remained unresolved which created a lot of hype among the audience. So it’s second part was also made to unveil the truth behind a particular event that took place and because of this its box office collection was tremendous. This effect is very powerful but it can backfire as well if it doesn’t live up to the expectations of the audience.

The Zeigarnik effect is also utilized by the marketers and the advertisers to encourage consumers to buy their products. It is also used in the trailer of a movie made by the filmmakers in order to make the audience curious and grab their attention towards the upcoming movie by leaving out some of the important details from it.

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Zeigarnik effect can also helps us to overcome procrastination. If we start a work but if it left incomplete, we will find ourselves thinking about that particular work or task until it not finished. We might not be able to finish all the work at once but each step will take us closer to the completion of the task.

Review Of Literature:

Mantyla & Sgaramella (1997) conducted two experiments, in which they examined the effects of task interruption on memory for intentions. In the first experiment, participants studied a series of anagrams in which most of them either solved one-half or two-thirds. In the second experiment, the participants were interrupted in between solving the tasks by the experimenter. Furthermore, four anagrams differed from the remaining anagrams in that the third letter of each item was underlined. The participants got instructed to choose whether a subsequently presented anagram contained the same or a different third letter as the underlined letter of the cue item. The results of both experiments showed Zeigarnik-like effects in prospective memory, so that cue items that were associated with interruption in the anagram task were better reminders than were items that were associated with completion. These outcomes suggest that interruption of an ongoing activity facilitates subsequent prospective memory performance, possibly by increasing the level of activation of the underlying intention representation that, in turn, increases the individual's sensitivity to identify the target event.

Bosquet & Schiffman (2013) conducted an experiment to examine the effect of task interruption and closure on perceived duration. In the experiment, the first group was presented 10-three letter anagrams to solve, after which they were asked to estimate the approximate time it took to solve the task. This group experienced closure when they completed the task. While the second group was presented with a 20-item-set of anagrams in which the 10 items were identical to those items which were presented to the first group. The subjects were interrupted after completing 10 tasks. The second group also estimated the approximate time they took to complete the task. In the results a significant difference was observed that subjects who were interrupted significantly overestimated the time it took to solve the first 10 anagrams. This outcome suggests that task interruption has a lengthening effect on perceived duration.

Guo (2015) conducted a study to examine whether a relation exists between the zeigarnik effect and creative thinking ability in prototype elicitation. In this study 20 scientific

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inventions creations problems as the material were selected. The 10 vs 10 learning and testing experimental paradigm as well as testing-recalling experimental paradigm was adopted. In the result, it was found that the zeigarnik effect was more evident for the participants who had high creative thinking ability than the lower ones because people with creative personality had an affect on their sensitivity for creative problems. It also showed that the prototype effect was occurred when heuristic information was offered in creative problem solving. The outcome of this study suggests that a relation does exist between the zeigarnik effect and people with high creative thinking ability in prototype elicitation.

Davidson & Martin (2016) conducted an experiment to examine the recall of completed and interrupted tasks by achievers and underachievers. In the experiment, the relation between high school achievement and zeigarnik effect was studied. 12 pencil paper tasks were performed by the subjects out of which ½ of them were interrupted in between. It was done under 2 levels of instruction-induced motivation. In the result, it was found that the achievers were able to recall the incomplete tasks better than the underachievers.

Johnson et al., (2017) conducted a study to examine the achievement motivation and the recall of incomplete and complete exam questions. In the study a sample of 205 male students were picked who indicated their level of aspiration on a final exam and were asked to recall the exam items. To classify the subjects into motive groups, 2 measures of resultant achievement motivation, 1 objective and 1 in part projective were used. As a result, Subjects who were high in resultant achievement motivation recalled a greater percentage of failed than passed questions for both the measures. The outcome suggests that these subjects also exhibited a greater Zeigarnik effect than those subjects who were low in resultant achievement motivation.

Description Of The Test:

Zeigarnik effect was discovered by the Russian psychologist Bulma Zeigarnik in 1927 who claimed that the interrupted problems hold a special status in memory due to which recall of incomplete tasks is much better than the completed ones. In Zeigarnik's experiment, subjects were given approximately 20 tasks to perform. In half of these tasks, subjects were interrupted before finishing the task and were told to put it aside by the examiner. The interruption was made when the subject looked most focused in his work. Subjects were allowed to complete the other half of the tasks. After performing all of the tasks, though not always to completion, the subjects were asked to recall all the tasks. In the result it was found

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that unfinished tasks were 90% more likely to be recalled than finished ones. The influence of the Zeigarnik effect can be seen in various places in society: cliffhangers at the end of a TV series show, commercials for the evening news posing questions. These unfinished tasks will spur the viewer to tune in to find out the answer and therefore finish the task. It can also be helpful in education. Posing a question to the class at the end of a lecture will most likely lead the class to think about the answer until the next class.

Hypothesis: Respondents will remember incomplete/interrupted tasks more as compared to complete tasks.

Method:

Subject Preliminaries:

Name: XYZ

Age: 20

Gender: Female

Educational Qualification: BA (Hons.) Political Science (II)

Material Required:

One set of different tasks, pen, pencil, stopwatch, plain sheet.

Variables:

Independent Variable: Nature of the task

Dependent Variable: Recall

Instructions:

I will give you one set which consists of 10 different tasks. When I say start, you have to start and when I say stop, you have to stop. The tasks are time bound, so, complete as fast as you can.

Precautions:

Before the conduction of the experiment, it was ensured that the lighting facility in the lab was proper. Tasks were presented in a proper manner to avoid the chance of being fatigued

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and repetitiveness. It was made sure that there was no background noise to avoid unwanted distractions.

Procedure:

The subject was made to sit in a quiet and comfortable lab. Rapport has been established with the subject by convincing them that their responses will be kept confidential. Then, the instructions were given to the subject. One by one, each task has been attempted by the subject, keeping in mind tasks are time bound. Time taken and the responses of the subject were noted down very carefully. Next day, the recall was taken by asking the subjects to recall the name of the tasks he/she had attempted the previous day. Then, the responses were noted down. While the subject is writing the introspective report of his experience, the experimenter is writing the observational report.

Introspective Report:

It was a very nice experience and the experiment was also very interesting. Initially I was very nervous but the experimenter made me feel comfortable. She gave me the instructions to perform the test and also told me about the procedure properly. It was a fun experiment and I really enjoyed it.

Observational Report:

The subject was patient and comfortable throughout the experiment. She understood and followed my instructions properly. She seemed a bit nervous while performing the incomplete tasks but everything went really smooth and the subject was thanked for her cooperation.

Result Table:

S.NO.	Name Of Completed Tasks	Recalled Tasks	Name Of Incomplete Tasks	Recalled Tasks
1	Identify the correct logo	✓	Maze	✓
2	Join the appropriate opposite	x	Flag guess	✓
3	Recalling	✓	Replace the question mark	✓
4	Odd one out	x	Spot the difference	x

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5	Riddles	x	Word Search	x
		Total recalled-2		Total recalled- 3

Calculations:

Percentage remembrance of complete tasks = Recalled Tasks x 100

Total no. of tasks

= _2_ x 100 = 20%

10

Percentage remembrance of incomplete tasks = Recalled Tasks x 100

Total no. of tasks

= _3_ x 100 = 30%

10

Result & Discussion

The main aim of this experiment was to assess the influence of the Zeigarnik effect on the recall of tasks. From the result table we can see that the total no. of complete tasks that the subject was able to recall was 2. While, the total no. of the incomplete task which the subject was able to recall was 3. Therefore, the percentage of the completed tasks are 20% while the percentage of the incomplete tasks are 30%. The subject recalled the incomplete task more than the complete tasks. This happened due to the zeigarnik effect. In this effect, any interruption caused in a task which requires concentration can improve the ability of a person to remember that particular task afterwards. Also, according to this effect, once the task is completed successfully, our brain tends to forget it more easily than the incomplete ones. In this experiment, the subject was given total ten tasks in which the subject was given sufficient

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time to perform the first 5 tasks (taken as complete tasks) due to which the forgetting of completed tasks happened much easily. While, in the last 5 tasks, the subject was interrupted in between when she was extremely focused while doing the incomplete tasks. Due to this interruption, the subject was able to recall incomplete tasks better than the completed ones because of the desire (or motivation) to complete it, so it was retained in her memory. Hence, the hypothesis is proved.

Atkinson (1953) conducted an experiment to investigate the achievement motive and recall of the interrupted and completed tasks. In the experiment, the subjects were divided into three groups for an interruption of tasks experiment on the basis of the instructions that were presumed to vary the probability that the subjects would perceive completion as their personal success and incompletion of the task as a personal failure. Based on a thematic appreciation measure of the need to achieve, the subjects were also classified into high or low motivation. In the result, it was found that the subjects high in achievement motivation were able to recall the incomplete tasks and showed the tendency of zeigarnik effect better than those who were low in achievement motivation.

Baddeley (2008) conducted an experiment to examine the zeigarnik like effect in the recall of anagram solutions. In the experiment, subjects were asked to solve a series of 12 anagrams problems. They were given 1 minute to complete each task and if they were unable to complete the task in the given time frame, they were told the solution. At the end of the series, each subject was asked to recall the solutions words. In the results it was found that the subjects were able to recall the incomplete items twice as often than they were able to recall the completed items.

Therefore, from the above studies we can say that the zeigarnik effect enabled the subject to recall the incomplete tasks better better than the completed ones.

Conclusion:

In this experiment, the zeigarnik effect was performed on the subject to assess the influence of the zeigarnik effect on the recall of tasks. To perform this experiment, the subject was given 10 tasks to complete within a time-frame given for each task. In the initial 5 tasks the subject was given ample time and was not interrupted in between attempting the tasks. While, in the last 5 tasks, the subject was interrupted before finishing the task. The interruption was made when the subject looked most focused in her work. The other day, subject was asked to recall the name of each task which they had performed. In the result, it was found that the

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subject was able to recall 2 complete tasks and 3 incomplete tasks. This happened due to the interruption which was made while the subject was performing the incomplete tasks and also because incomplete tasks hold a special place in our memory while, we tend to forget complete tasks more easily than the incomplete ones. The desire or motivation to complete the incomplete tasks kept it retained in the subject's memory. Thus, the percentage of the recall of complete tasks were 20% while, the percentage of the recall of incomplete tasks were 30%. Therefore, after analysing the data, we can conclude that the hypothesis which was taken in the beginning was correct and true from the result obtained in the experiment. The subject was able to recall the incomplete/ interrupted task better than the completed tasks.

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